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October 27, 2003

Food Guide Pyramid Reassessment Team USDA Center for Nutrition Policy and Promotion 3101 Park Center Drive, Room 1034 Alexandria, VA 22302

FR Doc. 03-22763 Notice of Availability of Proposed Food Guide Pyramid Daily Food Intake Patterns and Technical Support Data and Announcement of Public Comment Period. 68 <u>Federal Register</u> 53536, September 11, 2003

### FOOD GUIDE PYRAMID REASSESSMENT COMMENTS

The Grocery Manufacturers of America (GMA) appreciates this opportunity to offer comments concerning the Department of Agriculture (USDA), Center for Nutrition Policy and Promotion's (CNPP) proposed Food Guide Pyramid Daily Food Intake Patterns and Technical Support data. GMA and its members applaud the leadership of the Department of Agriculture in this critical effort of reassessing the Food Guide Pyramid to provide up-to-date, science-based information to help Americans live more healthful lives and reduce risk of chronic disease.

GMA recognizes that nutrition standards have evolved since the Food Guide Pyramid (FGP) was introduced in 1992, in large part because of more recent data, such as the Institute of Medicine's Dietary Reference Intakes of 1997 and 2002, the 2000 Dietary Guidelines for Americans, and Health People 2010. In addition, GMA acknowledges that food supply and food consumption patterns have changed since 1992, as evidenced by the USDA's 1994-96 Continuing Survey of Food Intakes by Individuals and the 1999-2000 National Health and Nutritional Examination Survey. For these reasons, a revision of the FGP is a timely public health declaration.

GMA and its members believe it is important for Americans to understand that to be healthy they must eat a nutritionally-balanced diet, and they must be physically active and moderate their food intake to match level of physical activity. GMA recognizes the important role of America's food and beverage producers in helping consumers reach this goal, and intends to play an active and positive part in this process. The food guide must be based on sound nutritional, health and behavioral science. Additionally the food guide needs to be supported by nutrition and physical education programs that work and that will help Americans put the Dietary Guidelines into practice. The CNPP must seize the opportunity to learn from experience with the current FGP and develop a workable, common sense approach that fits how consumers live, work and play today and help all Americans lead healthy and active lives by giving them information about nutrition and physical activity that is understandable and relevant to their daily lives.

GMA provided the Dietary Guidelines Advisory Committee 10 Guiding Principles for addressing the issues and successfully updating the dietary guidelines. We encourage the CNPP to incorporate them into their discussions about the FGP:

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- 1. They must be relevant to how consumers live today and their evolving complex lifestyles.
- 2. They must recognize the important and positive role that the enjoyment of food plays in our family, cultural and social lives.
- 3. They should help Americans lead healthy, active lives by providing consumers with guidance on nutrition AND physical activity and balancing their caloric intake and their energy expenditure.
- 4. They must recognize the different nutritional and activity needs of children, adults and senior citizens.
- 5. They must recognize the different circumstances of and communicate effectively to diverse populations such as Hispanics and African Americans.
- 6. They must be based on peer-reviewed science.
- 7. They should provide parents and educators with the tools they need to be effective role models and to teach children health habits early.
- 8. They must be supported by nutrition and physical education programs that have been demonstrated to be effective.
- 9. They must include clear measurement and evaluation so that we will know if they are making a meaningful difference for public health.
- 10. The Dietary and Physical Activity Guidelines<sup>1</sup> and the Food Guide Pyramid. development processes should be effectively aligned, so that the guidance and education we provide consumers are consistent.

These principles provide an architecture to the reassessment process to ensure the resulting food guide will help *all* Americans lead healthy and active lives by giving them information about nutrition and physical activity that is understandable, relevant, and can be reasonably implemented into their daily lives.

CNPP has solicited comments on all aspects of the proposed revisions to the Daily Food Intake Patterns that serve as the technical basis for the Food Guide Pyramid and on several specific issues and questions. GMA offers the following responses to CNPP's request for comments.

1. Appropriateness of using *sedentary*, *reference-sized individuals* in assigning target calorie levels for assessing the nutritional adequacy and moderation of each food intake pattern.

CNPP points out that the calorie levels for food patterns used in comparing intakes for nutritional goals are those that are appropriate for sedentary individuals. The apparent rationale for basing the target caloric pattern on a sedentary approach was that assuming a higher level of activity as the target pattern (e.g., 'low active') may have risks associated with higher suggested energy intake levels that may promote weight gain in some individuals. CNPP also states that use of sedentary levels does not require the assumption that a person needs to be active in order to meet nutrient needs, stating that 'given the sedentary lifestyles of many Americans, it was considered better not to assume any specific level of physical activity.

<sup>&</sup>lt;sup>1</sup> Please see the statement submitted to the US Dietary Guidelines Advisory Committee by GMA on September 15, 2003 requesting a change in the name of the guidelines from "Dietary Guidelines" to "Dietary and Physical Activity Guidelines".

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GMA recognizes that CNPP based the proposed sedentary energy levels on current evidence that a majority of U.S. adults are not physically active on a regular basis (MMWR 2003). However, using sedentary reference-sized individuals in assigning target calorie levels is not in the public health interest. The word target implies something Americans should aspire to. Targeting sedentary calorie levels is exactly the opposite of what we want Americans to do. It would seem more appropriate for CNPP to focus their recommendations toward a more positive outcome, such as the approach reflected in the 2000 Dietary Guidelines for Americans to "Be physically active each day" or "Aim for a healthy weight". GMA strongly encourages the CNPP to put its considerable influence behind efforts to urge Americans to increase their daily levels of exercise. Scientific and medical literature demonstrates the need to increase physical activity patterns in the United States to incur health benefits, especially maintenance of weight through physical activity. Healthy People 2010 and a 1996 Surgeon General's report on physical activity and health state that moderate physical activity can reduce substantially the risk of developing or dying from certain chronic diseases, such as heart disease, diabetes, colon cancer, and high blood pressure. The CNPP should use its revision of the Food Guide Pyramid as an opportunity to promote positive behavioral change.

The Institute of Medicine (IOM) Macronutrient Report 2002 says that one of the most important steps to a healthy diet and lifestyle is to start by "adopting an active lifestyle." The recommended physical activity level (PAL) suggested by IOM is  $\geq 1.6 < 1.9$  (active) to decrease risk of chronic disease, maintain ideal body weight, and for lower weight people to be able to meet their Dietary Reference Intakes (DRI) for micronutrients and fiber. Despite that, the physical activity coefficients used to determine energy levels for proposed intake patterns in the Food Guide Pyramid reassessment are below that recommended in the IOM report necessary for reaping healthy lifestyles, at 1.00 (sedentary), range of 1.11 – 1.16 (low active), and 1.25 – 1.31 (active).

We know from research that exercise induces an additional small increase in energy expenditure for some time after the exercise itself has been completed. This excess post-exercise oxygen consumption (EPOC) is dependent on exercise intensity and duration, and has been estimated at some 15 percent of the increment in expenditure that occurs during physical exertion. This means the increase in daily energy expenditure extends beyond the exercise activity itself. In addition, regular physical activity induces chronic changes in energy expenditure as a result of changes in body composition and alterations in the metabolic rate of muscle tissue, neuroendocrine status, and changes in spontaneous physical activity associated with altered levels of fitness. In other words, there are exponential health benefits related to regular physical activity.

Different population groups have different levels of physical activity, according to Healthy People 2010. Children are far more active than older Americans. Government data show that 69 percent of young people aged 12-13 years participate in vigorous physical activity. Moreover, 73 percent of high school aged boys and 57 percent of girls participate in vigorous physical activity (MMWR 2002). Unfortunately, participation in all types of physical activity declines markedly as age or grade in school increases. In general, persons with lower levels of education and income are the least active in their leisure time. Data show that major *decreases* in physical

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activity occur during grades 9 through 12. The President's Council on Physical Fitness and Sports concluded that because of the physical health, growth, development, and emotional benefits of physical activity, it should have an increasingly important role in the lives of children and adolescents. Because the scientific literature confirms that most children are in fact physically active, it would be inappropriate to set food intake patterns based on sedentary activity levels as it could potentially lead to undernutrition in children and adolescents.

Moreover, physical inactivity in itself is an important risk factor for serious chronic illnesses, such as coronary heart disease (CHD). In particularly susceptible populations, such as the poor and minorities, which already have a higher prevalence of hypertension, hypercholesterolemia, and smoking, a sedentary lifestyle may further compromise their health status. Indeed, the proportion of the population reporting no leisure-time physical activity is higher among women than men, higher among African Americans and Hispanics than whites, higher among older adults than younger adults, and higher among the less affluent than the more affluent (Healthy People 2010). For these groups, even small increases in physical activity are associated with measurable health benefits.

GMA acknowledges that CNPP proposed sedentary intake patterns out of concern for the increasing incidence of overweight and obesity among Americans. Because of that concern, question of whether obese individuals may have decreased energy requirements after weight loss, a factor that would help explain the common phenomenon of weight fluctuations associated with weight loss, has been investigated. Resting metabolic rate (RMR) is consistently depressed during active weight loss out of proportion to the loss of fat free mass (FFM), but there is controversy over whether RMR remains depressed after weight has stabilized at a lower level. To offset this phenomenon, physical activity should be encouraged (IOM Macro).

This substantial body of evidence underscores the urgency of this need: the CNPP must assert that physical activity is a key contributor to a healthful lifestyle and should be recognized as a fundamental component of the final FGP. As a public health priority, the government ought to promote physical activity rather than simply set a low bar that sedentary Americans are likely to clear. This observation raises another question. Does USDA have efficacy data that indicates that sedentary individuals will reduce their caloric consumption to comply with the guide? It is far better for individuals to learn how to balance their energy needs and intake requirements than to passively adopt energy levels that encourage inactivity. Using sedentary energy levels as a standard does not promote increased physical activity nor does it help consumers learn how to achieve personal energy balance. Emphasizing sedentary energy levels addresses only one side of the energy balance equation. Therefore, GMA again strongly encourages the CNPP to put its considerable influence behind efforts to urge Americans to increase their daily levels of exercise. Promoting increased physical activity and teaching individuals how to moderate their calorie intake to meet their energy expenditure would be a more responsible and, based on the evidence cited above, a more effective public health approach.

To the extent that USDA used nutritional standards and nutritional goals to derive nutrient profiles for food groups, the same logic should be applied to develop physical activity standards and goals by authoritative bodies such as the IOM. This would ensure that physical activity goals

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are not only incorporated into the *total* energy balance equation, but that they are on par with nutritional goals.

One immediate step the Department should consider is to recognize the mission of promoting energy balance by urging that the Food Guide Pyramid evolve to become the 'Diet & Physical Activity Guide' showing Americans how to *live* the Dietary Guidelines.

GMA urges CNPP to change the Food Guide Pyramid to the "Diet & Physical Activity Guide"

The American public needs a guide that addresses the *total* healthy lifestyle equation. Healthful eating and physical activity need to be in balance to truly be a science-based approach to guiding Americans on a healthful lifestyle. For more than a century, USDA food guides have served as pictorial, science-based guidance on diet and health. From the *basic seven* (used during war time to address economic restraints and alternative food choices due to limited rations); to the *basic four* (emphasis on getting *enough* nutrients); the *Hassle-Free Guide to Better Diet* (which added a fifth group to the *basic four* and paid special attention to calories and fiber); and finally, the food guides evolved into the joint USDA/Department of Health and Human Services *Dietary Guidelines for Americans*, (greater specificity on body weight and an attempt to provide more practical guidance on implementation *vis-à-vis* USDA's food guide pyramid), food guidance has evolved to reflect the latest scientific wisdom and public health approaches to healthful eating and more recently, lifestyle. Today, balancing energy intake with physical activity is the top public health priority.

In keeping with the historic spirit of addressing the most up-to-date, science-based information and the philosophical goals that the food guide be evolutionary to accommodate the anticipated direction of recommendations and promote overall health and well-being, the Food Guide Pyramid must evolve to help Americans actually live the Dietary Guidelines for Americans. Current research shows us that physical activity is a key factor in a healthy lifestyle. Therefore, the American public needs a guide that addresses the total healthy lifestyle equation. This can be done only by expanding the approach from dietary information alone to also include lifestyle guidance. A thorough science-based approach must include both healthful eating as well as physical activity in order to truly guide Americans to a healthy lifestyle.

The Food Guide Pyramid, as originally conceived, is intended for individuals. Hence, a new 'Diet & Physical Activity Guide' should continue in that tradition – to become in essence, a personal energy balance plan. An approach that would aid Americans to *live* the Dietary Guidelines would be to develop a sound educational tool that illustrates how to adopt a healthful lifestyle. For instance, the Diet & Physical Activity Guide could guide individuals to determine their own personal health goals in a step-wise process (1. Assess activity level/Adopt an active lifestyle, 2. Calculate your energy intake; 3. Determine your nutrient needs, etc). USDA would need the necessary consumer research to develop a sound educational tool to accomplish this concept.

The "Diet & Physical Activity Guide" should be aimed at healthy, not obese, Americans

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GMA supports CNPP's efforts to base the reassessment on the same philosophical goals as established in the development of the Food Guide Pyramid release in 1992, specifically the philosophy that the new food guide should promote overall health and well-being. Food selection guidance should not be directed to the prevention or treatment of any single disease. The new food guidance should maintain this philosophical standard to be consistent with the Dietary Guidelines for Americans, which is to establish the principles of a diet that would help people maintain and even improve their overall health and reduce the risk of major diet-related diseases. The Diet & Physical Activity Guide should be directed to the same audience as the Dietary Guidelines – healthy Americans, 2 years of age and older.

### 2. Appropriateness of the selection of nutritional goals for the daily food intake patterns

The recommendation for daily consumption of 40 grams of added sugar (8% of calories) for someone consuming 2000 calories per day is neither realistic nor reasonable. The recommendation for 40 grams (for a 2000 calorie a day diet) of added additional fats is also problematic These recommendations are not consistent with the way American consumers eat and live today, and they would be extremely difficult to follow, particularly for children or adolescents.

The recommended goal for sugar is also inconsistent with allowances by other agencies. Although limiting consumption of added sugars is desirable, a realistic goal is more likely to be followed than an unrealistic one. Consistent with the Dietary Reference Intakes macronutrient report, added sugars should not exceed 25 percent of calories to prevent displacement of micronutrients. Additionally, in "Nutrients In Proposed Food Intake Patterns" [Table 5, page 4] it is not obvious how the caloric intakes were calculated, and it appears that the ratio of percent calories from added sugar is not consistent across the listed caloric patterns. Regarding the added fat recommendation, it is very difficult for consumers to quantify how much fat is contained in the unlabeled foods they eat. And, for consumers to be expected to add up the total amount of added fat at the end of the day and be able to distinguish from fat intrinsic to many foods is unrealistic. Moreover, any distinction between added and intrinsic fat, or added and intrinsic sugar, makes no physiological difference.

Rather than applying the 'use sparingly' qualifier to 'additional fat' and 'added sugar', it is important to recognize than many people are more likely to choose to eat some foods that are made more palatable with the addition of nominal amounts of fat or sugar. Therefore, instead of suggesting intake patterns that are unreasonable for many consumers, it would be more sensible to recognize that foods with 'additional fat' and 'added sugar' may be necessary to deliver essential nutrients — without exceeding total daily recommendations for sugar and fat — and adjust intake patterns accordingly. This is a much more realistic and likely more effective recommendation.

The assessment of caloric targets and dietary intake patters will also be incomplete without considering hydration and fluids. It would be short sighted for CNPP to move forward with the food guide revisions without considering the pending electrolyte report from the Institute of Medicine.

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In any event, CNPP needs to conduct consumer research to demonstrate that these proposals will actually work for consumers.

# 3. Appropriateness of the proposed food intake patterns for educating Americans about healthful eating patterns.

USDA's move from three caloric patterns to the proposed 12 different caloric patterns/levels would make the Food Guide Pyramid extremely complex and difficult for consumers to understand and follow. The goal of the Food Guide Pyramid should be to help consumers understand how they can eat a nutritionally balanced diet for optimum health. If the number and complexity of the different caloric patterns are so complex that the average consumer can't understand or interpret them, their use will be very limited.

Additionally, GMA believes that the proposed reassessment of the Food Guide Pyramid is incomplete because it does not show relevance to how consumers actually live their lives today. The appropriateness of the proposed food intake patterns for educating Americans about healthful eating patterns cannot be determined without understanding the true education needs of consumers as well as the feasibility of any proposed food intake patterns in the context of consumer's day to day lives. USDA needs to apply a commonsense standard to the principles of diet, nutrition and health in order to develop an effective lifestyle guide.

A number of studies have shown that consumers do not follow the Food Guide Pyramid. According to NHANES 3, NHANES 4, and the Healthy Eating Index (HEI) shows that only 1 percent of children between 2 and 19 years old met all the Food Pyramid recommendations for grains, vegetables, fruits, meats, and dairy foods. Sixteen percent of children met none of the recommendations. Additionally, less than 1 percent of the total population meets *all* Food Guide Pyramid food group recommendations.

Recognizing that the Food Guide Pyramid has not increased consumer understanding nor improved dietary behavior to the degree expected, GMA believes it would be better for CNPP to test the feasibility of the proposed food patterns with consumers to show that consumers do in fact understand the information and can effectively apply the food patterns in their daily lives. What is needed are real-world, practical approaches based on consumer research in a variety of populations of differing demographic status, such as low income, low literacy, Hispanic and African American populations, and at different life stages

USDA states that the proposed revision to the daily food intake patterns on the same philosophical goals that were used to develop the original Pyramid in 1992. The 1992 Philosophical Goals for A New Food Guide state that the new food guide must be useful to the target audience with food groups used as a conceptual framework and that the groups are recognizable to consumers. GMA strongly believes that the proposed reassessment is incomplete in that it does not show relevance to consumers today. In fact, USDA's own qualitative consumer research to assess consumer understanding and application of the Food Guide Pyramid revealed that some consumers believe the Pyramid does not accommodate their food preferences

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or dietary restrictions. This is similar to results of consumer research conducted by the International Food Information Council (IFIC) on perceptions of the Food Guide Pyramid.

One of the main disappointments of the Food Guide Pyramid has been the lack of consumer implementation. If the USDA only tests possible communication messages, if the USDA only assesses proposed target calorie patterns against data tables, then we are all likely to continue to be disappointed. It is impossible to determine the general utility of these patterns without understanding how they are understood by individuals in various demographic and age subgroups. There is also a need to understand whether consumers can put the food patterns into practice in real-life situations, for example confirming that consumers can select foods at the grocery store and prepare and eat meals at home, and select foods and meals when they dine out, that, over several days, are consistent with the proposed daily food intake patterns. Therefore it is imperative for USDA to dedicate time and resources to determine whether individuals of diverse socioeconomic and cultural backgrounds can in fact put the proposed food patterns into practice.

# 4. Appropriateness of using 'cups' and 'ounces' vs. 'servings' in consumer materials to suggest daily amounts to choose from each food group and subgroup.

Research with consumers is needed to determine appropriateness of using 'cups' and 'ounces' versus 'servings' in consumer materials. Consistent with the philosophical goals as established with the original Food Guide Pyramid, GMA agrees that using standard household measures is an appropriate approach that would help to make the guide more relevant and potentially improve implementation of food guidance. USDA's own consumer research on the current Food Guide Pyramid revealed that despite apparent familiarity with the Pyramid, this awareness does not translate into understanding of specific Pyramid recommendations and messages.

Additionally, consumers in general criticized the Pyramid because they did not agree with the range of servings in certain food groups or found it difficult to follow. Most consumers don't know the standard serving sizes for foods. The USDA consumer research showed confusion among consumers when asked to explain the difference between servings and portion sizes. When asked how to improve understanding of 'servings' on the Pyramid, consumers agreed that using household measures would help. While GMA agrees that using standard household measures is an appropriate approach to take when conveying food group servings, it is imperative that CNPP conduct consumer testing to determine whether these proposed changes will make implementation of the new food intake patterns easier.

### 5. Selection of appropriate illustrative food patterns for various consumer materials.

The ultimate objective of the food guide is to ensure that more consumers eat more consistently with the final food patterns chosen to illustrate healthful eating guidance. What the twelve food patterns that CNPP proposes indicates is that one size does *not* fit all when it comes to dietary intake recommendations. Therefore, more research is needed to establish what will resonate with consumers, and which educational tools are needed in order to synthesize food patterns into population guidance.

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Additionally, the underlying concept of GMA's above mentioned 10<sup>th</sup> Guiding Principle is to improve education efforts related to healthful lifestyles for Americans. As the voice of branded foods – the foods that consumers purchase at the supermarket everyday – GMA sees the need for consistency in all educational materials related to healthful eating and active living. In essence, GMA is in support of harmonizing educational information for healthful lifestyles at all touch points for consumers – including the Dietary Guidelines, Food Guide Pyramid, and the Nutrition Facts Label.

The development processes for these important educational tools should be effectively aligned, so that the guidance and education we provide consumers is consistent. This must be accomplished in a step-wise manner to achieve harmony in collaboration with the Food and Drug Administration, backed up with sufficient consumer research to ensure relevance and understanding of proposed concepts and educational tools. At their October 23<sup>rd</sup> public hearing on obesity, the Food and Drug Administration announced their intent to hold a workshop on November 20, 2003 to discuss changes to the food label as it relates to educating consumers on healthful eating. For this reason, all the Departments need to work together to ensure consistency rather than continue down a path with inconsistent messages related to food intake recommendations.

GMA urges CNPP to foster alignment in the development of these educational tools. CNPP can begin by using the same Daily Values of 2,000 and 2,500 calories used as the basis of the Nutrition Facts Label as appropriate illustrative food patterns. This would elevate the Food Guide Pyramid to be the educational tool it is intended to be by giving consumers a direct link between the food guide and the labels on the foods they are buying. Integrating the Food Guide Pyramid more fully with the Dietary Guidelines for Americans, and harmonizing both with the Nutrition Facts Label, should reduce consumer confusion and improve implementation of the Dietary Guidelines.

The most important goal we all share is to get consumers to live a healthier lifestyle. For that reason, we believe that the USDA should pilot test the Diet & Physical Activity Guide before releasing it nationally.

Sincerely,

Alison Kretser

Director, Scientific & Nutrition Policy

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October 24, 2003

Dr. Eric J. Hentges
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Center for Nutrition Policy and Promotion (CNPP)
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Subject: Notice of Availability of Proposed Food Guide Pyramid Daily Food Intake Patterns and Technical Support Data and Announcement of Public Comment Period.

Dear Dr. Hentges,

The CNPP presents an extensive list of inquires for which they seek comment. Each inquiry deserves input, and I wish that I had the expertise and time to comment on all the issues. I'll elect to provide some general comments initially, which I hope pertain to the issues and are not too pedantic. In rereading this letter, I realize I may be rambling at times with my comments. As requested, more specific comments or suggestions are provided on the topics of sedentary individuals, total fiber, added sugars, whole grains, additional fats, and serving size.

The Dietary Guidelines, periodically reviewed and updated are good, simple and achievable recommendations on nutrition and better health for the consumer. Change is good, but not too fast. Yes, the guidelines should be and are based on "current nutritional standards", but these standards, and the new scientific information supporting these changes are a slow evolutionary process. This comment

is based on reviewing some of the responses to inquiries requested and posted on the CNPP Web page to date. Although you have stated that the possible redesign of the food pyramid will be at a latter date, there seems to be serious interest in placing "oils" at the bottom or foundation of the food pyramid. Respondents want major change now. I am also familiar with the scientific campaign and media blitz of a handful of scientists to change the food pyramid to accommodate their suggestions based solely on epidemiological evidence. This is not a good idea. There is insufficient evidence that we should be giving the impression to people that they should be consuming more "oils".

The food pyramid or any similar pictorial representation designed to assist consumers with the selection of foods for healthy diets should be based on a rich consumption of all plant foods, both natural (apple, carrot, barley) and processed (apple sauce, carrot cake, and barely soup). Also the consumer should receive the recommendation to eat meats, sea foods, milks, legumes, and nuts, but as with all foods, in moderation. Meats, milks, and nuts are excellent sources of nutrients, but can provide too much fat and too many calories if eaten in excess. Savory snacks and soft drink beverages can be a part of our diets, but there must be a strong recommendation to limit consumption of these foods because of their high fat-oil and sugar content, respectively, and more importantly, their high caloric content. Food companies should be encouraged to find ways to reduce the amount of fats-oils and sugar(s) in these foods. I would like to think that the availability of sugar substitutes is a tremendous food science innovation for weight management. Is it time to revaluate fat substitutes in our diet, and possibly develop second generation products?

While it is reasonable for food companies to produce savory snacks and soft drinks, it is the obligation of U.S. public health policy makers (Dietary Guidelines and Food Pyramid) to inform people about the high energy density of these foods. Consumers must be more explicitly informed that savory snacks and sugar-based soft drinks-beverages are high calorie/energy-dense foods that must be eaten in moderation.

Since we face epidemic weight mismanagement, which in many cases leads to obesity, special efforts are needed to

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review recommendations about excessive fats and oils, sugar and calories. It is my strong professional and personal thinking that the nation's weight problem is caused by the combination of too many calories and too little exercise. Every plant and animal commodity, including sea foods, provides nutrition. Every processed food made from raw commodities provides nutritious foods. However, not every food commodity and processed food can be mentioned in the Dietary Guidelines or Food Pyramid, but consumers can be told to eat a larger variety of all food commodities and processed foods in moderation. We must do more to help people learn more about portion size, eating less food at each meal or snack, and most importantly, consuming fewer calories.

I realize the difficulties, but political and economic pressures can not come to bear on decisions about nutrition and public health recommendations. Furthermore, the recommendations made here are used as a model and as recommendations have an international impact.

I frequently cite the book by Heasman and Mellentin entitled Functional Foods Revolution, Healthy People, Health Profits (2001, Earthscan Publ., Ltd., London). This book reviews some the changes in the last quarter century regarding how we look at foods and the chemicals in these foods and their contributions to nutrition and health. The last quarter century has been a scientific awaking in nutrition and health. We have begun to realize that there are naturally occurring chemicals in foods that have beneficial and health giving properties, in addition to the 41 plus essential nutrients. Although I realize that the Food Pyramid and the Dietary Guidelines not primers on the topic of functional foods, both these tools for consumer nutrition should stress the current knowledge about functional foods and the ingredients (nutraceuticals) they contain. This can be done by recommending that people eat a large variety of foods, which include both unprocessed and processed foods.

Exercise is important and necessary. As American lifestyles are changing, perhaps it is the sedentary individual that will evolve and predominate. Possibly the word exercise is too intimating. Persons who lead a more sedentary life style might think of recommendations for exercise as running, going to the gym, bicycling, or swimming. While these are excellent forms of exercise, they

are sometimes time consuming, require expensive equipment, or expensive facilities. However, walking, dancing, and or stretching at home are good forms of exercise and cover a wide range of abilities, activities, and interests. There could be recommendations to simply find an "activity" to move the muscles and burn calories. I recommend the idea that "walking" should be promoted as the key form of "activity" and "exercise" associated with the Dietary Guidelines and the Food Pyramid - persuade Americans to eat a greater variety of foods, in moderation, and walk.

I would take great exception to a recommendation for the Dietary Guidelines and Food Pyramid to use "oil" as the building block for better health and nutrition. A future pyramid or recommendations that suggest starchy foods, such as white bread, foods made with flour, rice, potatoes and pasta, be avoided would be deplorable. There is no evidence that these foods are bad or lead to diseases. These foods, like any food, can be deleterious to health if eaten continually, without the benefit of other foods and in excess. Too much food leads to too many calories, and the result is now readily apparent; too much weight gain. With all the interest in syndrome x, the glycemic index, and glycemic load, these are creative, interesting, experimental and clinical ideas that might possibly help formulate nutrition and health policy in the future. However, these theories are still in the experimental stages and, as such, require tremendous refinement to find either results or application, much less be utilized for major recommendations for dietary habits. The bottom line is that these theories and experiments, coupled only with epidemiological-based studies, should not be the basis for changing our Dietary Guidelines and the Food Pyramid.

The Nutrition Labeling and Education Act provided the tremendous initiative to better educate the consumer. However, I think there is almost unanimous consensus that the "education" competent of this act has never been fully started, and there is little implementation of the "education" part of this act.

I am not sure how to suggest avoiding the term sedentary. Use of the tem appears to be giving license to an individual to be sedentary and we will make recommendations to promote this life style? The value, or more appropriately, the necessity to have all people exercise through one or more activities now must be a

mandatory part of any dietary guidelines. I realize use of the word "mandatory" and attempt to make exercise mandatory, is futile and inappropriate. However, some type or types of physical activity should become a part of every individual's life style, and a strong component of any nutrition and health guidelines and recommendations. Again,

walk more.

Somewhere reference must be made for all individuals to become better acquainted with their height and weight. As every individual should be helped to better identify the volume and weight of the food that eat, and the caloric density of their foods, every person should be encouraged to use a scale as a simple index of for their personal well being and long-term health. The Dietary Guidelines and Food Pyramid should help a person use and understand the importance of the Body Mass Index (BMI). I realize having a person equate the food they eat to their BMI may be a formidable educational task, but again, this may be accomplished through the "education" component of the NLEA.

I would recommend that we start by recommend that Americans

As a frequent attendee at professional meetings on foods, nutrition and health, I find that I'm frequently listening or talking to peers who might know even more about my topic. But, it is often stated that lower income individuals, families and specific ethnic groups suffer more from poor nutrition, disease, and the likelihood of being overweight or obese. However, because it is stated so frequently, it could be that a different approach might be necessary to help these groups not simply receive the Dietary Guidelines and Food Pyramid information, but understand the information and how to use it. This is another example of how "education" can be implemented through the NLEA.

In summary, my suggestion is that the Dietary Guidelines and Food Pyramid recommendations should guide consumers to eat a greater variety of all foods (unprocessed and processed) in moderation. Additional measures are necessary to help consumers grasp an understanding of portions, portion size and the true amount of food consumed daily. Too much of any food, or macronutrient, or micronutrient, is not good. I am not against fat, but excess fat provides excess calories. I am not against sugar(s), but excess sugar provides excess calories. A simplified method to help consumers recognize

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excess oils and fats, and sugar(s) in their diets, and better ways to avoid excesses in these energy rich dietary components is necessary. Some form of physical activity should be recommended as part of our Dietary Guidelines and Food Pyramid. I now offer comments of particular interest to CNPP.

 Appropriations of using sedentary reference-sized individuals in assigning target calorie levels (Table 2)

Although I am not excited about using or condoning the term sedentary, I realize it is and is becoming a more common lifestyle for many people. So we must find ways to help inform this group to seriously consider controlling their caloric intake, while still given them the recommendation to find some type of activity.

2. Appropriateness of the selection of nutritional goals for the healthy food intake patterns.

### Nutritional goal for total fiber

The topic of dietary fiber (DF) has been advanced with the National Academy Science (NAS, 2002) report on macronutrients and setting Adequate Intake (AI) value for this nutrient. The AI for this micronutrient, which is one component value of the Dietary Reference Intakes (RDI), was set at 38 and 25 g/day for men and women, respectively. I understand that work is in progress to review the current Daily Value (DV) for dietary fiber, which currently is 25 grams per day. There are other important set of figures in the NAS report on DF. The median intakes of DF for women range from 12.1 to 13.8 g/day and 16.5 to 17.9 g/day for men. Therefore, our intake of DF is approximately one-half of the recommended intakes. We can set a higher DV for DF, greater than 25, but will this help or encourage people to eat more DF? There must be ways to encourage and help people eat more plant foods, and offer them different opportunities through other foods to consume more DF.

I could easily recommend a DV for DF of 35 g/d or even 45 g/day, but again, what can be done to have people eat more DF and come close to achieving a daily intake of 35 or 45 g per day? The frequently mentioned nutritional problem with DF is that it binds and interferes with mineral

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bioavailability. Since the DF hypothesis was developed based on populations who eat foods and diets providing approximately 90 g of DF per day, and modern day vegetarians suffer no impaired mineral nutrition, the topic of DF interfering with minerals should be considered mute. Review of the scientific literature and experimental studies support this contention. (Gordon, D. T., Stoops, D. and Ratliff, V. 1993. Dietary fiber and mineral nutrition. In: Dietary Fiber. Eds. D. Kritchevsky and C. Bonfield. Plenum Press, N.Y. pp. 280-302.)

The on-going question about DF is, do plant foods, which happen to contain DF provide for better health (oats), or is DF alone, as a measurable single entity ( $\beta$ -glucan) the special macronutrient that provides protection against diseases? I feel both plant foods, and processed foods with isolated or functional fibers (nondigestible fiber or added fiber) help provide for better health and help provide foods of lower caloric density. Our consumption of DF, from all sources, plant foods and as functional fiber, as defined by the NAS (2002), provides benefits for laxation, energy for intestinal bacteria (as a prebiotic), and as a caloric diluent in foods.

Although the NAS (2002) set three definitions for DF, there appears to be a stalemate as to how the FDA and Health Canada can use these and how these definitions can be applied to measuring DF in Foods to have total fiber. For the NAS definition of a functional fiber, there is no way that the beneficial physiological effects can be measured to report the amount on a food label.

The NAS (2202) suggestion that actual dietary fiber intakes are higher than reported is true. However, the level suggested by the NAS of 5.1 g/day, 2.6 g/day inulin and 2.5 g/day oligofrutose, does not include many other DF (functional fiber) in foods such as resistant starch(s), resistant maltodextrin (Fiberol-2) Poloydextrose, galactooligosacchridess, and the oligosaccharides in soy to name a few. More emphasis must be placed on modifying the existing AOAC Method for Total Dietary Fiber to recover and include all forms of nondigestible carbohydrates (whether called dietary fiber, functional fiber, or total fiber) in foods. There are approved AOAC methods to measure soluble oligosaccharides in foods and these methods should be given recognition by the FDA as methods to measure DF in foods. It is interesting to note that if in fact we are consuming

05.1 g of inulin and oligofructose per day, these fructose rich saccharides would represent approximately 20% of our current DF intakes. These figures for suggested intakes of fructose oligosaccharides, and not reported in food composition tables, may need to be reevaluated.

#### Nutritional goal for added sugar.

On first impression, the NAS (2202) suggestion or recommendation "to limit added sugars to less than 25% of calories as a maximal level" would appear to be a mistake. I concur with the CPNN work that sugar(s) intakes should range from 6% to 13% of total calories. Sugar is not the culprit or cause of poor health and disease, or obesity. Excess sugar(s) provide excess calories. Sugar is a convenient and easily available source of excess energy. Efforts must be made to advice people to restrict or limit their calorie intake from sugar and setting more realistic goals as to their sugar(s) intake is necessary. If an upper limit of 25% of calories were to be set, what specific foods must be eaten to supply the wide range of nutrients and other macronutrients to meet our nutritional goals with the other 75% calories? Conversely, what foods will be eliminated from an individual's diet to allow 25% of calories from sugar? Sugar is not bad, but too much sugar in not good for us. Having the suggestion that 25% of our calories provided from sugar is not a good suggestion.

## 3.Appropriateness of the proposed food intake patterns for educating Americans about healthful eating habits.

There should be more allowances made as to what constitutes a whole grain(s) and cereal(s) to allow for their greater incorporation into foods and their consumption. More effort and allowance should be made to allow for greater consumer awareness as to the availability of whole grain(s) and cereal(s) foods. Since there seem to be almost total consensus that whole grains and cereals are good for us, and can be a rich source of DF, more effort must be made to identify and make these whole commodities available to the consumer. One possible way to address these problems has been suggested by altering the whole grain foods health claim (Gordon, D.T. 2003. Strengths and Limitations of the U.S. Whole Grain Foods Health Claim. Cereal Foods World. 48:210-214). The topic of better educating the consumer about whole grains and whole cereals, and counter the negative nutrition and health

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publicity given starchy foods such as white bread, and foods made with flour, and rice, potatoes, and pasta is another example of implanting the "education" component of the NLEA.

### Appropriateness of using "cups" and "ounces" vs "servings"

I favor using cups and ounces, and not servings to help consumers become more familiar with the volume and weight of foods they eat. Continued efforts must be made to standardize a serving or unit of food based on its volume and or weight. There is just too much variation in the term serving. For bread, ounces may help overcome the problem of a different number of slices of bread being a serving.

I have one last related comment to what I think pertains to amounts of food consumed. How can we better educate the consumer as to how to limit their fat intake to 30% of calories? I would contend that trying to educate the consumer to eat 10% of their calories from saturated fat, 10% from monounsaturated fat, and 10% of their fat calories from polyunsaturated fat is too complex and rarely if ever achieved. I would ask any of the CNPP staff reading this letter if and how they follow these guidelines on fat-oil intakes.

I hope by comments are of some value to CNPP and will be happy to provide any additional information.

Respectively submitted,

Dennis T. Gordon, Ph.D.

Professor

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October 27, 2003

Comments on the Food Guide Pyramid Daily Food Intake Patterns NPRM published in the Federal Register, vol. 68, No. 176, Thursday, September 11, 2003, pp. 53536-53539.

Statement from Mary G. Enig, Ph.D., F.A.C.N, L.N., C.N.S., Consulting Nutritionist, Enig Associates, Inc., Silver Spring, MD 20904; (301) 680-8600; Vice President of the Weston A. Price Foundation and Science Advisor, Washington DC; (202) 333-HEAL.

The current Food Guide Pyramid is not appropriate for anyone to use as a guide to select foods for a balanced diet. It promotes an excessive intake of carbohydrates for most people and discourages the intake of the natural important animal fats. A better approach is the four food groups and the eating practices recommended 60-70 years ago in books on nutrition and dietetics written before the introduction of imitation foods in the 1950s.

Recommended Food Pyramid guidelines: Everyday, eat high quality, unprocessed foods from each of the following four groups:

- 1. Animal foods: meat, poultry, fish, eggs and whole milk products
- 2. Grains and legumes: whole grain baked goods, breakfast porridges, beans
- 3. Fruits and Vegetables: preferably fresh or frozen
- 4. Fats and Oils: unprocessed saturated and monounsaturated fats including butter and other animal fats, palm oil and coconut oil, olive oil and peanut oil an average of 35-40 percent of energy from food intake should come from beneficial fats and oils.

Eat sparingly: sweets, white flour products, soft drinks, processed foods, polyunsaturated and partially hydrogenated vegetable oils and fried foods.

I am aware of the fact that this statement contradicts the information given to both the health profession and the public since the development of the U.S. Dietary Goals/Guidelines in the 1970s. These guidelines were originally developed with the help of the food industry to sell processed foods and the widespread usage of

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processed foods is the reason so many individuals, including children, are sick, obese, allergic, etc.

My experience as a nutrition educator and nutrition consultant is that the pyramid does not give anyone trying to use it any clear idea of the amounts of natural food products that would be appropriate versus the processed food products that would be selected. My own prejudice is that all of the food products used for forming meals and snacks should be natural and not the highly processed products that are so readily available in the supermarket. That would mean that there should be no products being promoted that are made or prepared with trans fatty acid-containing partially hydrogenated vegetable fats or with excessive amounts of omega-6 oils. Natural, more saturated fatt and oils such as butter, tallow, lard, coconut, palm and palm kernel oils should be encouraged rather than discouraged because of their health promoting components. These include the saturated fatty acids such as palmitic acid and lauric acid, both of which are needed in the diet; palmitic acid keeps lungs healthy and lauric acid helps the body fight many pathogenic bacteria and viruses.

Butter should be used instead of margarine. Milk and cheese products should preferably be full-fat. Nut milks should be used judiciously knowing that they are not an appropriate replacement for cow or goat milk, and imitation cheese should be avoided. Eggs should be farm raised as opposed to factory raised.

Meat, poultry, fish broths, stews, or roasts should be prepared with the fat that comes with the original meat. If there is more fat than would be normally found in the cooked foods, as they would be prepared by a quality chef, it should be refrigerated and saved for use as added fat in cooking vegetables, etc.

Grain products should be made with natural fats, not partially hydrogenated vegetable fats and oils. Amounts of grain products should be individualized with the realization that many individuals are carbohydrate sensitive. Grain products made with sugar and normally served as desserts should be recognized as foods for occasional consumption that may have excessive calories for some individuals. Fruits and vegetables should be encouraged to be grown organically.

There are many recommendations about the amounts of fat and the different types of fatty acids we should put into our diets. Who needs which fat(s) and how much? Are men different than women in their requirements? Are children different than adults in their requirements? What about the tolerances for fat as opposed to the absolute requirements for fat? What about the requirements for different fatty acids or different fatty acid categories? How much fat do children need for growth and development? How much of each of the different fatty acid classes do children need?

### What Do the U.S. Food Pyramid Promote for Children?

Proponents of the U.S. Food Pyramid have been promoting the lower fat intake for children just as they have been promoting it for adults. The USDA has even gone so far

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as to proudly acclaim that it has successfully developed lower fat meals for school lunches. This approach to feeding children is not healthy.

The reason for the existence of the Food Pyramid is the mistaken belief that these guidelines will decrease the development of heart disease in adults. Recently the concept has been extended to children, and the idea of feeding children lower fat diets in an effort to ward off the development of heart disease in later life has gained acceptance among some pediatric research groups.

But pediatric clinicians noted a number of years ago that children who were put onto low-fat and low-cholesterol diets failed to grow properly. And when researchers prominently associated with the American Heart Association fed children lower fat diets and measured some of the markers they consider important predictors of heart disease, they learned that these lower fat diets were causing the very problems they wanted to prevent. The children whose genes would normally have been producing the desirable form of LDL (light fluffy LDL) started to make the dangerous form of LDL (the small dense LDL).<sup>2</sup>

#### What Roles Do Different Fatty Acids Play in Keeping Children Healthy?

Children have been shown to be more susceptible to infectious diseases than most adults. In the past, the mortality in children was higher than it is now. That was because we did not have the antibiotic treatments that we now have. But infants who were fed human milk did not usually succumb to the viral illnesses that they were exposed to because their mothers were providing them with disease-fighting components in their milk. Some of these disease-fighting components in the mother's milk were special fatty acids that the mammary gland made. These fatty acids are called lauric acid and caproic acid. These disease-fighting fatty acids can be part of older children's diets if they consume foods that contain coconut or coconut oil, palm kernel oil, or to a lesser extent, cream and high-fat milk

#### What Are Good Fats and Oils for Children?

Good fats and oils are found in meat and fish and fat in vegetables, nuts, and grains, or they can be added to foods through cooking and as dressings and sauces. A spoonful of good fat or oil can be easily added to soup or stew or mixed dishes or hot cereals.

Good fats are dairy fats such as butter, cream, and whole milk. Good fats are natural fats from properly fed animals, poultry, and fish. These animal fats supply vitamin A, vitamin D, and the proper cholesterol needed for brain and vision development. Animal vitamin A is critical for growing children as they do not adequately convert the vitamin A precursor — beta-carotene — found in plants. The animal fats also supply other fat-soluble nutrients that support the immune system such as glycosphingolipids. Fish oils such as cod liver oil also supply important elongated omega-3 fatty acids as well as vitamins A and D.

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Good oils are those readily extracted from fruits such as olive oil, palm oil, coconut oil, and they are traditionally unrefined. Good oils are also those that are unrefined and extracted from many nuts and seeds. Some of these oils are called omega-3 oils, omega-6 oils, and omega-9 oils. Oils with plenty of omega-3 include flaxseed oil and perilla oil; those with moderate amounts of omega-3 fatty acids include unrefined canola oil, soybean oil, and walnut oil. Many oils such as unrefined corn oil, safflower oil, and sunflower oil do not have omega-3 but are typically high in omega-6 fatty acids, and they should be used in small amounts.

Foods for children should be chosen so that they supply a mixture of these different fats and oils. No one fat or oil can properly suit all purposes, although many of the good quality animal fats come close. They also need an amount of elongated omega-3 fats that come primarily from fatty fish and fish oils. Children need adequate amounts of the stable saturated fats; they need enough of the monounsaturated fats or oils; and they need an adequate amount and a proper balance of the essential fatty acids, which come primarily from the omega-3 and omega-6 oils. Importantly, these oils should not be partially hydrogenated or refined.

#### References:

<sup>1</sup> Smith, MM, and F. Lifshitz, Pediatrics, Mar 1994, 93:3:438-443.

<sup>2</sup> Dreon, MD et al, American Journal of Clinical Nutrition 2000;71:1611-1616.